

October 5, 2009

Peter DeVries, Council Chair
State Building Code Council
Address: PO Box 42525
Olympia WA 98504-2525

Dear Mr. DeVries,

The proposed changes to the Washington State Energy Code RS-29 are flawed in two respects. First, the proposed method is based upon ASHRAE Appendix G, which is specifically not intended for code compliance. It is designed for assessing large changes in performance such as 30% better than code. The base system types are poorly assigned for determining close differences. Nearly 50% of the floor area in the northwest would have base system types different than what is typically installed. One story buildings larger than 25,000 ft² would have VAV systems as the basecase system. The impact of this sort of difference is not known at all but it would be a systematic bias either benefiting or penalizing buildings with this standard system type. Many changes are required before this language is suitable for the careful task of code compliance. ASHRAE itself has a specific performance path which is much more fully thought out and much more similar to the existing RS-29 than it is to the proposed RS-29.

The second issue is that the proposed RS-29 would not require buildings to comply with many existing and proposed requirements in the mechanical code. The proposed language specifically requires compliance with sections 1310-1314, 1410-1416, 1440-1443, 1450-1454, 1510-1514, and 1540. However most requirements in the complex system path are excluded with the exception of exhaust air heat recovery. These are general requirements of complex designs and are in sections 1430-1439 so that 1410-1416 general requirements remain navigable for simple buildings.

Code requirements that are not referenced and therefore not required include:

- 1436.2 (condensate HR)
- 1436.4 (refrigeration HR)
- 1515 (Egress Lighting OS required during unoccupied)
- 1432.3.1 (Hydronic Flow Criteria - hydronic loops must be designed for variable flow)
- 1432.5 (pressure reset required in VAV)
- 1439.1 (Kitchen Hoods. compensating requirement)
- 1439.2 (Fume Hoods. HR threshold reduced from 15000cfm to 5000cfm)
- 1455 (Pool HR)

The RS29 proposal might require the following but since the requirement is inexplicably in table 3.1 section 12 (Receptacle and Other Loads) rather than HVAC Systems it is not clear that HVAC systems would be required to follow these.

- 1438 (System Criteria VFD on ALL pump/fan motors >7.5HP)
- 1438.1 (heat rejection equipment table)
- 1438.2.1 (axial fan for open cooling towers > 1100GPM)
- 1438.3 (Large Volume Fan Sys. single or gang serving one zone with >10000CFM must vary airflow)

Thank you for considering these comments. Sincerely,

Michael Kennedy
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